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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/470,265	12/22/1999	KARL M ROBINSON	303.455US3	5953

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EXAMINER

TRAN, THIEN F

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/470,265

Applicant(s)

ROBINSON, KARL M

Examiner

Thien F. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19,20,80,81,83,84,98-102,104-110 and 113-124 is/are pending in the application.
- 4a) Of the above claim(s) 98-102,106,113,115 and 117-124 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19,20,80,81,83,84 and 107-110 is/are allowed.
- 6) ☒ Claim(s) 104,105,114 and 116 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 98-102, 106, 113, 115, 117-124, directed to the non-elected species are withdrawn from further consideration since they do not all depend upon or otherwise include all the limitations of an allowable generic claim as required by 37 CFR 1.141.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 104 and 114 are rejected under 35 U.S.C. 102(e) as being anticipated by Azuma et al. (US 5,708,302).

Azuma et al. discloses a capacitor (Fig. 1) comprising a first conductive plate (34) serving as a first electrode of the capacitor; a second conductive plate (28) serving as a second electrode of the capacitor, the second conductive plate formed of metal; and a dielectric structure interposed between the first and second conductive plates, wherein the dielectric structure is a metal oxide layer (26) overlying the first conductive plate, the oxide comprising titanium, and wherein the oxide of the metal layer directly contacts the second conductive plate.

Regarding claim 114, the capacitor further comprises a diffusion barrier layer (38) interposed between the first conductive plate (34) and the metal layer (28).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 105 and 116 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blodgett et al. (US 5,811,990) in view of Azuma et al. (US 5,708,302).

Blodgett et al. discloses a memory system (710 in Fig. 18) comprising a monolithic memory device (705) comprising a capacitor. Blodgett et al. does not explicitly disclose the capacitor comprising a first conductive capacitor plate, a second conductive capacitor plate and a dielectric structure of a metal oxide layer. Azuma et al. as described in details above discloses the capacitor as claimed. It would have been obvious to person having ordinary skill in the art at the time the invention was made to substitute the capacitor as taught by Azuma et al. for the capacitor in the memory system of Blodgett et al. in order to provide an improved capacitor which adheres well to the substrate and does not have short-inducing surface irregularities. As a result, Blodgett et al. in view of Azuma et al. provides a capacitor comprising a first conductive capacitor plate (34), a second conductive capacitor plate (28) of metal, and a dielectric structure (26) comprising a titanium oxide layer interposed between the first and second

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conductive capacitor plates, wherein the titanium oxide layer (26) directly contacts the second conductive capacitor plate (28).

Regarding claim 116, the capacitor further comprises a diffusion barrier layer (38) interposed between the first conductive plate (34) and the metal layer (28).

Allowable Subject Matter

Claims 19, 20, 80, 81, 83, 84, 107-110 are allowed.

Response to Arguments

Applicant's arguments with respect to claims 104, 114, 105 and 116 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thien F. Tran whose telephone number is (571) 272-1665. The examiner can normally be reached on 8:30AM - 5:00PM Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on (571) 272-1732. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

tt
August 4, 2006



Thien Tran
Primary Examiner